

EUROPEAN PATENT OFFICE

Patent Abstracts of Japan

PUBLICATION NUMBER : 03170307
PUBLICATION DATE : 23-07-91

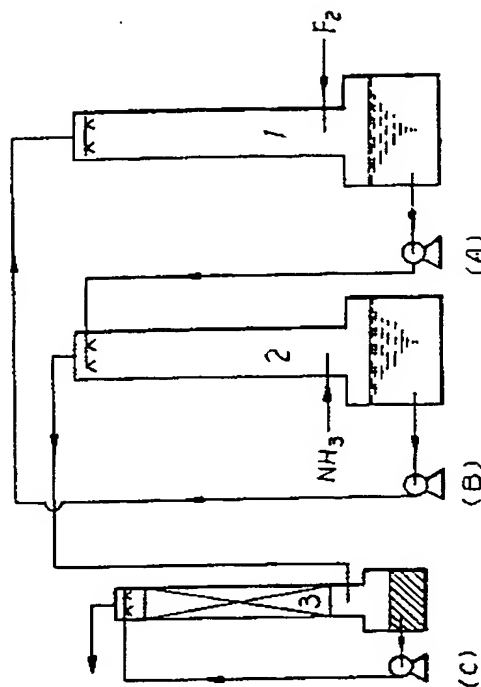
APPLICATION DATE : 27-11-89
APPLICATION NUMBER : 01307243

APPLICANT : KANTO DENKA KOGYO CO LTD;

INVENTOR : SATO SHIRO;

INT.CL. : C01B 21/083

TITLE : PRODUCTION OF NITROGEN
TRIFLUORIDE



ABSTRACT : PURPOSE: To improve the production efficiency of nitrogen trifluoride by introducing F gas after dissolving NH_3 into a perfluorocarbon liquid or by introducing NH_3 gas after dissolving F gas into a perfluorocarbon liquid.

CONSTITUTION: A 6-14C linear or cyclic perfluorocarbon which is liquid at normal temperature (e.g. perfluorohexane) is supplied to the top of an F- dissolution column 1 at a prescribed flow rate with a pump (B). At the same time, F gas is supplied to the column 1 from the bottom at a prescribed flow rate to accumulate the perfluorocarbon liquid containing dissolved F gas at the column bottom. NH_3 gas is introduced to the bottom of a reaction column 2 at a prescribed flow rate while supplying the accumulated perfluorocarbon liquid to the top of the column 2 with a pump (A). When perfluorocarbon liquid containing little dissolved F gas is accumulated in a liquid reservoir of the reaction column 2, the liquid is supplied to the F-dissolution column 1 with the pump (B) to dissolve F gas again in the liquid. In the course of the above circulating process, NH_3 , HF, N_2 and unreacted NH_3 are distilled out from the top of the reaction column 2 and supplied to a scrubbing column 3 containing 10% KOH aqueous solution circulating in the column. HF and unreacted NH_3 can be removed by this process to obtain objective NF_3 .

COPYRIGHT: (C)1991,JPO&Japio